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MEMORANDUM

To:	U.S. Environmental Protection Agency	**Date:**	February 8, 2017
From:	Newtown Creek Group	**Project:**	171037-01.01
Re:	Newtown Creek Baseline Ecological Risk Assessment: Tissue Screening Levels		

This memorandum responds to the U.S. Environmental Protection Agency's (USEPA's) e-mail of February 3, 2017, titled "TRV Memo Comments," specifically with regard to USEPA's comments on the tissue screening levels (SLs; Items 8, 10, and 11 of the e-mail). USEPA states that there is not enough information in the January 20, 2017 memorandum (NCG 2017) from the Newtown Creek Group (NCG) to determine how the listed SLs were derived.

As discussed in the Newtown Creek draft *Baseline Ecological Risk Assessment* (BERA; Anchor QEA 2016), and the January 20, 2017 memorandum, the U.S. Army Corps of Engineers Environmental Residue-Effects Database (ERED; USACE 2013) and PCB Residue Effects database (PCBRes; USEPA 2007) are the primary sources for the no observed effect concentrations (NOECs) used to derive the SLs presented in the BERA.

Therefore, this memorandum provides a series of tables with the NOECs from ERED and PCBRes that includes for each study the authors, the publication, the test species, the life stage, and the endpoints evaluated as downloaded from the databases, as well as NCG's calculation of the geometric mean for each endpoint. These are the geometric mean values presented in the BERA Table 5-3a for fish and Table 5-3b for invertebrates.

As noted by USEPA in their February 3, 2017 e-mail, because there is a wide range in the NOECs from the studies, the NCG used an average value and preferentially selected the geometric mean because it was always lower than the arithmetic mean. Furthermore, the NCG then selected the minimum of the geometric means regardless of the endpoint (reproduction, growth, or mortality) as an SL in the BERA.

As a reminder, when reviewing the data in the databases, the following criteria were applied:

- Only NOECs for reproduction, growth, and mortality were used (lowest observed effect concentrations [LOECs] were retained for reference).
- Only results presented as concentrations for whole body burdens were used.
- All life stages for each species were used.
- No duplicate results were presented.
- If the ERED notes stated there was a secondary exposure to a parasite or another chemical, the data were not used.
- For each endpoint (reproduction, growth, and mortality), a geometric mean NOEC was calculated, and the minimum of the three endpoints for a particular chemical was selected as the SL NOEC.

References

Anchor QEA (Anchor QEA, LLC), 2016. *Baseline Ecological Risk Assessment*. Draft. Remedial Investigation/Feasibility Study, Newtown Creek. February 2016.

NCG (Newtown Creek Group), 2017. *Newtown Creek Baseline Ecological Risk Assessment: Selection of Wildlife Toxicity Reference Values and Tissue Effect Thresholds*. Memorandum to U.S. Environmental Protection Agency. January 20, 2017.

USACE (U.S. Army Corps of Engineers), 2013. Environmental Residue-Effects Database (ERED). Accessed August 2013. Available from: http://el.erdc.usace.army.mil/ered/.

USEPA (U.S. Environmental Protection Agency), 2007. PCB Residue Effects (PCBRes) User Guide. Version 1.0. Prepared for USEPA Office of Research and Development, National Health and Environmental Effects Research Laboratory, Mid-Continent Ecology Division (MED). Prepared by Computer Sciences Corporation. Contract 68 W-02 032, Task 5003 and 5004. October 2007. Accessed August 2013. Available from: http://www.epa.gov/med/Prods_Pubs/pcbres.htm.